



**NEW ENGLAND
COMMON ASSESSMENT PROGRAM**

**Released Items
2008**

**Grade 7
Mathematics**

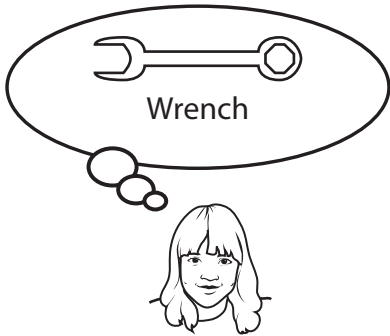
Mathematics



Items with this symbol were selected from Session One—no calculators or other mathematics tools allowed.

- 1 Which measure describes a rate?
- A. the distance a car is driven
 - B. the number of points a team scores
 - C. the amount of money earned per hour
 - D. the total mass of 10 bowling pins

- 2 Jenn is putting her wrenches away. She is missing a wrench with a size between $\frac{5}{8}$ inch and $\frac{3}{4}$ inch.



Which size wrench is missing?

- A. $\frac{1}{2}$ inch
- B. $\frac{9}{16}$ inch
- C. $\frac{11}{16}$ inch
- D. $\frac{7}{8}$ inch



- 3 Look at this number sentence.

$$1400 = 2 \times 2 \times 2 \times 5 \times 5 \times 7$$

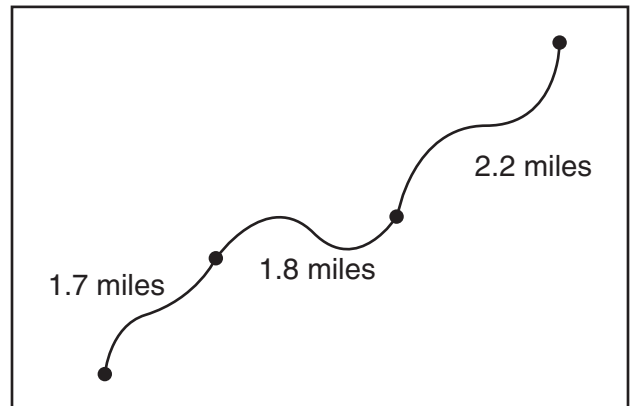
Which expression is equivalent to 1400?

- A. $2^3 \times 5^2 \times 7^1$
- B. $2^3 \times 5^2 \times 7^0$
- C. $2^2 \times 5^1 \times 7^1$
- D. $2^2 \times 5^1 \times 7^0$



- 4 Look at this map.

River View Trail



The Hikers Club is planning to clean River View Trail. The Hikers Club members separated into 3 groups. Each group will clean the same length of trail. How many miles of trail will each group clean?

- A. 1.6
- B. 1.9
- C. 2.3
- D. 2.7



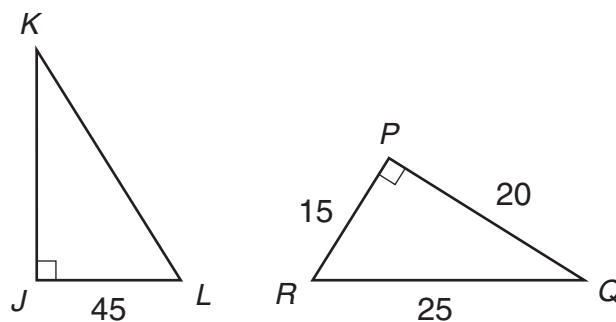
- 5 Allen has a piece of rope that is 84 inches long. He cuts off one piece that is $43\frac{3}{4}$ inches long and another piece that is $31\frac{5}{8}$ inches long. What is the length of the remaining piece of rope after the two cuts are made?

- A. $8\frac{5}{8}$ inches
- B. $9\frac{1}{3}$ inches
- C. $9\frac{5}{8}$ inches
- D. $10\frac{1}{3}$ inches

- 6 A three-dimensional shape has exactly 4 faces. Which three-dimensional shape could it be?

- A. rectangular prism
- B. rectangular pyramid
- C. triangular prism
- D. triangular pyramid

- 7 Triangle JKL is similar to triangle PQR ($\triangle JKL \sim \triangle PQR$).



not drawn to scale

Which statement is true?

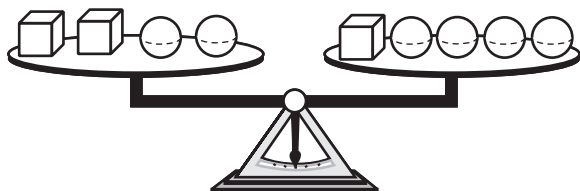
- A. $\triangle JKL$ and $\triangle PQR$ have the same area.
 - B. $\triangle JKL$ and $\triangle PQR$ have the same perimeter.
 - C. The ratio of the area of $\triangle JKL$ to the area of $\triangle PQR$ is 3:1.
 - D. The ratio of the perimeter of $\triangle JKL$ to the perimeter of $\triangle PQR$ is 3:1.
- 8 Look at this equation.



$$m = 5 + 0.25t$$

What is the value of m when the value of t is 10?

- A. 7.50
- B. 15.25
- C. 20.00
- D. 52.50

- 9 Look at this balanced scale.



Each  weighs s pounds. Each  weighs c pounds. Which equation is shown by this scale?

- A. $6c = 3s$
- B. $4cs = 5sc$
- C. $c^2 + s^2 = c + s^4$
- D. $2c + 2s = c + 4s$

- 10 This stem-and-leaf plot shows the daily high temperatures for two weeks in July.

7	0 1 1 2 2 7
8	1 5 6 6 6
9	0 1 2

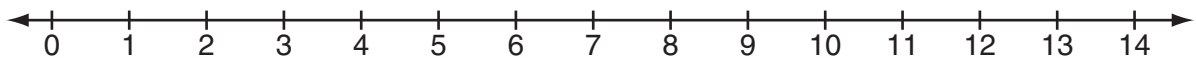
Key

7 | 1 represents 71°F

What was the mode temperature for these two weeks?

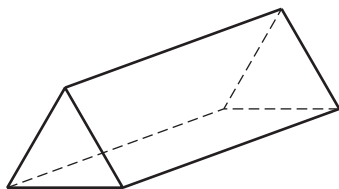
- A. 77°F
- B. 83°F
- C. 86°F
- D. 92°F

- 11 Look at this number line.



Draw a point for the number $\frac{13}{4}$ on the number line.

- 12 Look at this three-dimensional figure.



How many vertices does the figure have?

- 13 A square is divided into two triangles by one of its diagonals.
- Use one of the words *acute*, *obtuse*, or *right* to tell what kind of triangles are formed. Explain your answer.

Another square is divided into two triangles by one of its diagonals.

- Use one of the words *equilateral*, *isosceles*, or *scalene* to tell what kind of triangles are formed. Explain your answer.



- 14 Five people applied for jobs at a store. Only two of these five people will be hired. How many different pairs of people could be hired? Show your work or explain how you know.
- 15 The cost, in dollars, for school groups to go to a museum can be calculated by using the expression $10t + 5s$, where t is the number of teachers and s is the number of students.
- Jamestown School has a group of 3 teachers and 40 students going to the museum. How much will it cost, in dollars, for the group from Jamestown School to go to the museum?
 - The total cost for a group from Martinsburg School to go to the museum is \$290. If there are 50 students in this group, how many teachers are in the group? Show your work or explain how you know.
 - Fill in the chart below to show three different possible groups of teachers and students that would be charged exactly \$125 to go to the museum.

	Number of Teachers	Number of Students	Total Cost
Group 1			\$125
Group 2			\$125
Group 3			\$125

Grade 7 Mathematics Released Item Information

Released Item Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
No Tools Allowed			✓	✓	✓									✓	
Content Strand ¹	NO	NO	NO	NO	NO	GM	GM	FA	FA	DP	NO	GM	GM	DP	FA
GLE Code	6-1	6-2	6-3	6-4	6-4	6-3	6-5	6-3	6-4	6-1	6-2	6-3	6-1	6-4	6-3
Depth of Knowledge Code	2	2	1	2	2	2	2	1	1	2	1	1	2	2	3
Item Type ²	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	SA	SA	SA	SA	CR
Answer Key	C	C	A	B	A	D	D	A	D	C					
Total Possible Points	1	1	1	1	1	1	1	1	1	1	1	1	2	2	4

¹Content Strand: NO = Numbers & Operations, GM = Geometry & Measurement, FA = Functions & Algebra,
DP = Data, Statistics, & Probability

²Item Type: MC = Multiple Choice, SA = Short Answer, CR = Constructed Response



**NEW ENGLAND
COMMON ASSESSMENT PROGRAM**

**Released Items
Support Materials
2008**

**Grade 7
Mathematics**

**NECAP 2008 RELEASED ITEMS
GRADE 7 MATH**

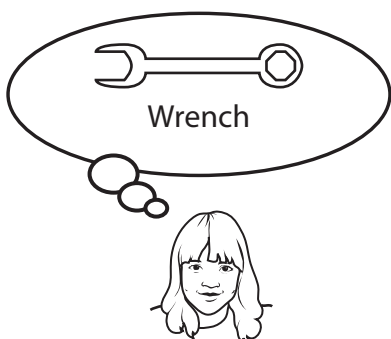
N&O 6.1 Demonstrates conceptual understanding of rational numbers with respect to ratios (comparison of two whole numbers by division a/b , $a:b$, and $a \div b$, where $b \neq 0$); and rates (e.g., a out of b, 25%) using models, explanations, or other representations.

- ❶ Which measure describes a rate?
- A. the distance a car is driven
 - B. the number of points a team scores
 - C. the amount of money earned per hour
 - D. the total mass of 10 bowling pins

NECAP 2008 RELEASED ITEMS
GRADE 7 MATH

N&O 6.2 Demonstrates understanding of the relative magnitude of numbers by ordering or comparing numbers with whole number bases and whole number exponents (e.g., 3^3 , 4^3), integers, or rational numbers within and across number formats (fractions, decimals, or whole number percents from 1–100) using number lines or equality and inequality symbols.

- 2 Jenn is putting her wrenches away. She is missing a wrench with a size between $\frac{5}{8}$ inch and $\frac{3}{4}$ inch.



Which size wrench is missing?

- A. $\frac{1}{2}$ inch
- B. $\frac{9}{16}$ inch
- C. $\frac{11}{16}$ inch
- D. $\frac{7}{8}$ inch

NECAP 2008 RELEASED ITEMS
GRADE 7 MATH

N&O 6.3 Demonstrates conceptual understanding of mathematical operations by describing or illustrating the meaning of a power by representing the relationship between the base (whole number) and the exponent (whole number) (e.g., 3^3 , 4^3); and the effect on the magnitude of a whole number when multiplying or dividing it by a whole number, decimal, or fraction.



- 3 Look at this number sentence.

$$1400 = 2 \times 2 \times 2 \times 5 \times 5 \times 7$$

Which expression is equivalent to 1400?

- A. $2^3 \times 5^2 \times 7^1$
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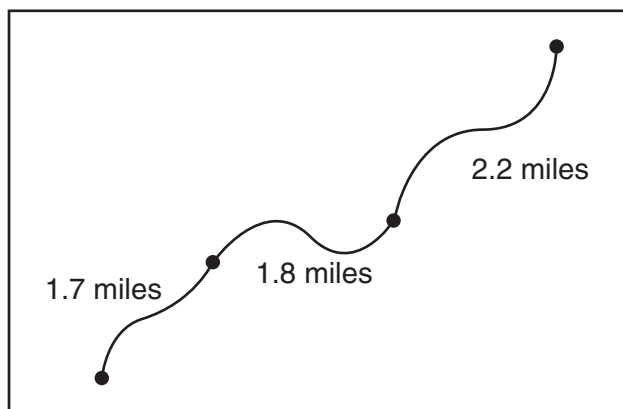
NECAP 2008 RELEASED ITEMS
GRADE 7 MATH

N&O 6.4 Accurately solves problems involving single or multiple operations on fractions (proper, improper, and mixed), or decimals; and addition or subtraction of integers; percent of a whole; or problems involving greatest common factor or least common multiple. (IMPORTANT: *Applies the conventions of order of operations with and without parentheses.*)



- 4 Look at this map.

River View Trail



The Hikers Club is planning to clean River View Trail. The Hikers Club members separated into 3 groups. Each group will clean the same length of trail. How many miles of trail will each group clean?

- A. 1.6
- B. 1.9
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NECAP 2008 RELEASED ITEMS
GRADE 7 MATH

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- 5 Allen has a piece of rope that is 84 inches long. He cuts off one piece that is $43\frac{3}{4}$ inches long and another piece that is $31\frac{5}{8}$ inches long. What is the length of the remaining piece of rope after the two cuts are made?

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**NECAP 2008 RELEASED ITEMS
GRADE 7 MATH**

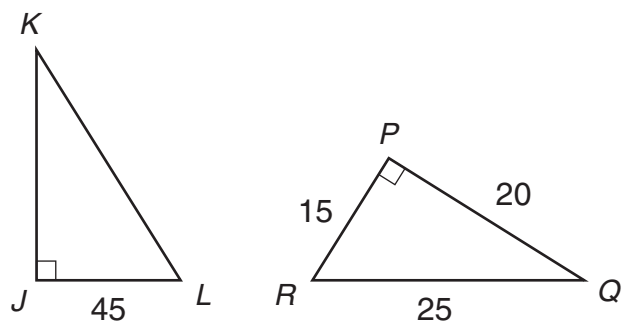
G&M 6.3 Uses **properties or attributes** (shape of bases, number of lateral faces, number of bases, number of edges, or number of vertices) **to identify, compare, or describe three-dimensional shapes** (rectangular prisms, triangular prisms, cylinders, spheres, pyramids, or cones).

- 6** A three-dimensional shape has exactly 4 faces.
Which three-dimensional shape could it be?
- A. rectangular prism
 - B. rectangular pyramid
 - C. triangular prism
 - D. triangular pyramid

NECAP 2008 RELEASED ITEMS
GRADE 7 MATH

G&M 6.5 Demonstrates conceptual understanding of similarity by describing the proportional effect on the linear dimensions of polygons or circles when scaling up or down while preserving the angles of polygons, or by solving related problems (including applying scales on maps). Describes effects using models or^{sc} explanations.

- 7 Triangle JKL is similar to triangle PQR
($\triangle JKL \sim \triangle PQR$).



not drawn to scale

Which statement is true?

- A. $\triangle JKL$ and $\triangle PQR$ have the same area.
- B. $\triangle JKL$ and $\triangle PQR$ have the same perimeter.
- C. The ratio of the area of $\triangle JKL$ to the area of $\triangle PQR$ is 3:1.
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NECAP 2008 RELEASED ITEMS
GRADE 7 MATH

F&A 6.3 Demonstrates conceptual understanding of algebraic expressions by using letters to represent unknown quantities to write linear algebraic expressions involving two or more of the four operations; or by evaluating linear algebraic expressions (including those with more than one variable); or by evaluating an expression within an equation (e.g., determine the value of y when $x=4$ given $y = 3x-2$).

- 8 Look at this equation.

$$m = 5 + 0.25t$$

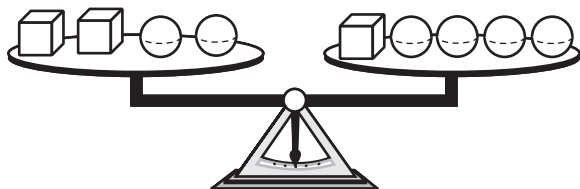
What is the value of m when the value of t is 10?



- A. 7.50
- B. 15.25
- C. 20.00
- D. 52.50

NECAP 2008 RELEASED ITEMS
GRADE 7 MATH

F&A 6.4 Demonstrates conceptual understanding of equality by showing equivalence between two expressions using models or different representations of the expressions (expressions consistent with the parameters of M(F&A)–6–3), solving multi-step linear equations of the form $ax \pm b = c$, where a , b , and c are whole numbers with $a \neq 0$.

- 9 Look at this balanced scale.



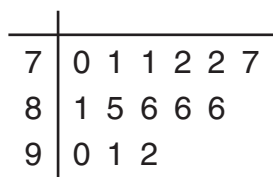
Each  weighs s pounds. Each  weighs c pounds. Which equation is shown by this scale?

- A. $6c = 3s$
- B. $4cs = 5sc$
- C. $c^2 + s^2 = c + s^4$
- D. $2c + 2s = c + 4s$

**NECAP 2008 RELEASED ITEMS
GRADE 7 MATH**

DSP 6.1 **Interprets a given representation** (circle graphs, line graphs, or stem-and-leaf plots) to answer questions related to the data, to analyze the data, to formulate or justify conclusions, to make predictions, or to solve problems. (IMPORTANT: Analyzes data consistent with concepts and skills in M(DSP)-6-2.)

- 10** This stem-and-leaf plot shows the daily high temperatures for two weeks in July.



Key

7 | 1 represents 71°F

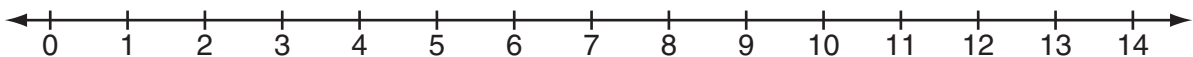
What was the mode temperature for these two weeks?

- A. 77°F
- B. 83°F
- C. 86°F
- D. 92°F

**NECAP 2008 RELEASED ITEMS
GRADE 7 MATH**

N&O 6.2 **Demonstrates understanding of the relative magnitude of numbers** by ordering or comparing numbers with whole number bases and whole number exponents (e.g., 3^3 , 4^3), integers, or rational numbers within and across number formats (fractions, decimals, or whole number percents from 1–100) using number lines or equality and inequality symbols.

- 11** Look at this number line.



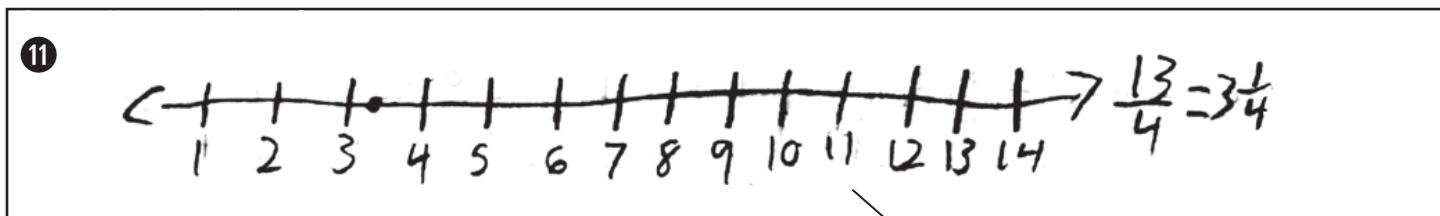
Draw a point for the number $\frac{13}{4}$ on the number line.

Scoring Guide

Score	Description
1	Student identifies correct location for $\frac{13}{4}$ on number line.
0	Response is incorrect or contains some correct work that is irrelevant to the skill or concept being measured.
Blank	No response

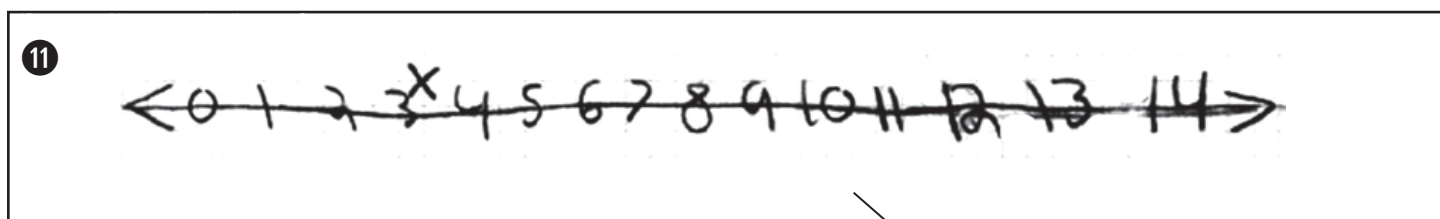
NECAP 2008 RELEASED ITEMS
GRADE 7 MATH

SCORE POINT 1
(EXAMPLE A)



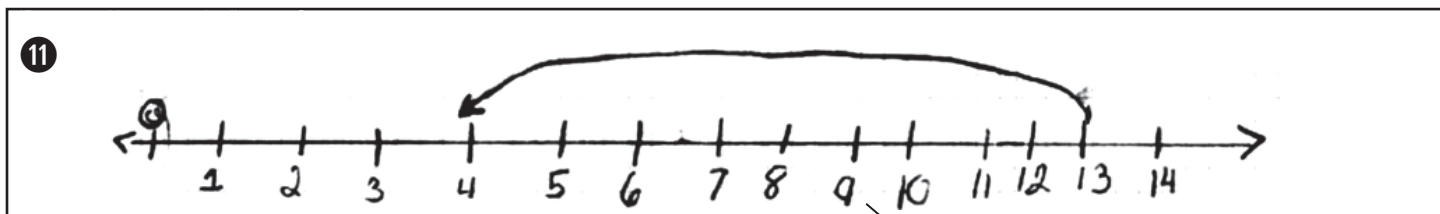
Student's response is correct.
(Explanation is not required.)

SCORE POINT 1
(EXAMPLE B)



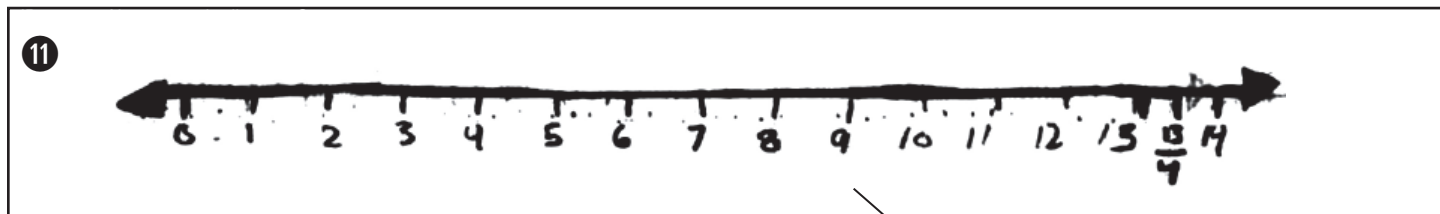
Student's response is correct.

SCORE POINT 0
(EXAMPLE A)



Student's response is incorrect.

SCORE POINT 0
(EXAMPLE B)

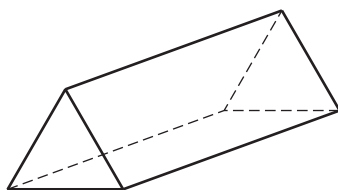


Student's response is incorrect.

**NECAP 2008 RELEASED ITEMS
GRADE 7 MATH**

G&M 6.3 Uses **properties or attributes** (shape of bases, number of lateral faces, number of bases, number of edges, or number of vertices) to **identify, compare, or describe three-dimensional shapes** (rectangular prisms, triangular prisms, cylinders, spheres, pyramids, or cones).

- 12** Look at this three-dimensional figure.



How many vertices does the figure have?

Scoring Guide

Score	Description
1	Student gives correct answer, 6 (vertices).
0	Response is incorrect or contains some correct work that is irrelevant to the skill or concept being measured.
Blank	No response

NECAP 2008 RELEASED ITEMS
GRADE 7 MATH

SCORE POINT 1
(EXAMPLE A)

12



These are 6 vertices

Student's response is correct.
(Showing work is not required.)

SCORE POINT 1
(EXAMPLE B)

12

6

Student's response is correct.

SCORE POINT 0
(EXAMPLE A)

12

I think it has five vertices in it
because if you were to unfold it you would
be able to see it.

Student's response is incorrect.

SCORE POINT 0
(EXAMPLE B)

12



12 vertices

Student's response is incorrect.

**NECAP 2008 RELEASED ITEMS
GRADE 7 MATH**

G&M 6.1 Uses **properties or attributes of angles** (right, acute, or obtuse) **or sides** (number of congruent sides, parallelism, or perpendicularity) **to identify, describe, classify, or distinguish** among different types of triangles (right, acute, obtuse, equiangular, scalene, isosceles, or equilateral) or quadrilaterals (rectangles, squares, rhombi, trapezoids, or parallelograms).

- 13** A square is divided into two triangles by one of its diagonals.
- a. Use one of the words *acute*, *obtuse*, or *right* to tell what kind of triangles are formed. Explain your answer.

Another square is divided into two triangles by one of its diagonals.

- b. Use one of the words *equilateral*, *isosceles*, or *scalene* to tell what kind of triangles are formed. Explain your answer.

Scoring Guide

Score	Description
2	Student gives correct answers with appropriate explanations for each part.
1	Student gives correct answer with appropriate explanation for one part.
0	Response is incorrect or contains some correct work that is irrelevant to the skill or concept being measured.
Blank	No response

NECAP 2008 RELEASED ITEMS
GRADE 7 MATH

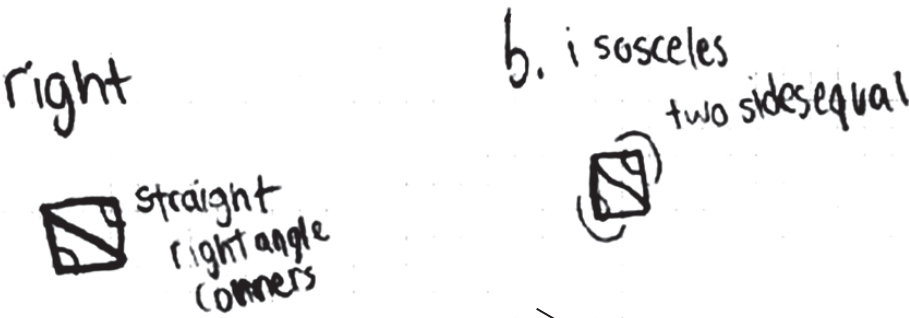
SCORE POINT 2
(EXAMPLE A)

13

right

straight
right angle
corners


b. isosceles
two sides equal



Student's response to each part is correct, with appropriate explanations.

SCORE POINT 1
(EXAMPLE A)

13

A)  right angles were formed because they are 90° .

B.) an isosceles triangle was formed because it has 2 sides the same length, and 1 that is long.

b) Student's response is correct, with appropriate explanation.

a) Student's explanation is insufficient to receive credit.

NECAP 2008 RELEASED ITEMS
GRADE 7 MATH



SCORE POINT 1
(EXAMPLE B)

- 13 a. The triangles are right triangles because they each have on right angle from the square they were made from.
- b. They are scalene triangles because they have 2 sides that are the same length.

Student's response is incorrect.

Student's response to part a is correct, with appropriate explanation.

SCORE POINT 0
(EXAMPLE A)

- 13 A) it is acute triangles
- 
- B) they are scalene triangles
- 
- 2 of the sides are congruent.

Student's responses to both parts are incorrect.

**NECAP 2008 RELEASED ITEMS
GRADE 7 MATH**

DSP 6.4 Uses counting techniques to solve problems in context involving combinations or simple permutations using a variety of strategies (e.g., organized lists, tables, tree diagrams, models, Fundamental Counting Principle, or others).



- 14** Five people applied for jobs at a store. Only two of these five people will be hired. How many different pairs of people could be hired? Show your work or explain how you know.

Scoring Guide

Score	Description
2	Student gives correct answer, 10 , with sufficient explanation or work shown to indicate correct strategy.
1	Student gives the correct answer with insufficient or no explanation or work shown. OR Student demonstrates appropriate strategy with incorrect or no answer.
0	Response is incorrect or contains some correct work that is irrelevant to the skill or concept being measured.
Blank	No response

NECAP 2008 RELEASED ITEMS
GRADE 7 MATH

SCORE POINT 2
(EXAMPLE A)

14

Five people: George = G
Bob = B
Fred = F
Rob = R
Moe = M

Pairs: G + B
G + F
G + R
G + M
B + F
B + R
B + M
F + R
F + M
R + M

10 different pairs could be hired.
20 counting duplicates.
Ex. G + M
M + G

15
16
17
18
19
20

Student's response is correct, with sufficient work shown to indicate correct strategy.

SCORE POINT 2
(EXAMPLE B)

14

10 people

A B
A C
A D
A E
B C
B D
B E
C D
C E
D E

Student's response is correct, with sufficient work shown to indicate correct strategy.

NECAP 2008 RELEASED ITEMS
GRADE 7 MATH

SCORE POINT 1
(EXAMPLE A)

14

Wanda Pete Jasper Amy BJ

This is my work -
It basically explains itself.
p.s. do you like the people?

- 1 WANDA - Pete
- 2 WANDA - JESPER
- 3 WANDA - AMY
- 4 WANDA - B.J.
- 5 PETE - WANDA
- 6 PETE - JESPER
- 7 PETE - AMY
- 8 PETE - B.J.
- 9 JES - AMY
- 10 JES - WANDA
- 11 JES - PETE
- 12 JES - B.J.
- 13 AMY - B.J.
- 14 AMY - WANDA
- 15 AMY - PETE
- 16 AMY - JESPER
- 17 B.J. - WANDA
- 18 B.J. - PETE
- 19 B.J. - JESPER
- 20 B.J. - AMY

20 combos

Student's strategy is appropriate, with incorrect answer.

SCORE POINT 1
(EXAMPLE B)

14

P Q R S G

15 different
combos

P,P	P,Q	P,R	P,S	P,G
Q,R	Q,S	Q,Q	Q,G	
R,R	R,S	R,G		
S,S	S,G	G,G		

Student's strategy is appropriate, with incorrect answer.

NECAP 2008 RELEASED ITEMS
GRADE 7 MATH

SCORE POINT 0
(EXAMPLE A)



14

2 pairs because two can only
go into 5 twice.

Student's response is incorrect.

**NECAP 2008 RELEASED ITEMS
GRADE 7 MATH**

F&A 6.3 Demonstrates conceptual understanding of algebraic expressions by using letters to represent unknown quantities to write linear algebraic expressions involving two or more of the four operations; or by evaluating linear algebraic expressions (including those with more than one variable); or by evaluating an expression within an equation (e.g., determine the value of y when $x=4$ given $y = 3x-2$).

- 15** The cost, in dollars, for school groups to go to a museum can be calculated by using the expression $10t + 5s$, where t is the number of teachers and s is the number of students.
- Jamestown School has a group of 3 teachers and 40 students going to the museum. How much will it cost, in dollars, for the group from Jamestown School to go to the museum?
 - The total cost for a group from Martinsburg School to go to the museum is \$290. If there are 50 students in this group, how many teachers are in the group? Show your work or explain how you know.
 - Fill in the chart below to show three different possible groups of teachers and students that would be charged exactly \$125 to go to the museum.

	Number of Teachers	Number of Students	Total Cost
Group 1			\$125
Group 2			\$125
Group 3			\$125

Scoring Guide

Score	Description
4	5 points
3	4 points
2	2 or 3 points
1	1 point
0	Response is incorrect or contains some correct work that is irrelevant to the skill or concept being measured.
Blank	No response

**NECAP 2008 RELEASED ITEMS
GRADE 7 MATH**

Training Notes:

- Part a: 1 point for correct answer, **230** (dollars)
- Part b: 2 points for correct answer, **4** (teachers), with sufficient work shown or
 explanation given to indicate appropriate strategy
 OR
 1 point for correct answer, with insufficient or no work shown or explanation
 given to indicate appropriate strategy
 or
 for appropriate strategy shown with incorrect or no answer
- Part c: 2 points for three correct pairs of numbers that solve $10t + 5s = 125$
 OR
 1 point for two correct pairs of numbers that solve $10t + 5s = 125$

NECAP 2008 RELEASED ITEMS
GRADE 7 MATH

SCORE POINT 4
(EXAMPLE A)

15

a.) \$230

a) Student's response is correct.

b.) $50s = 250 + 40 = 290$

4 teachers

b) Student's response is correct, with sufficient work shown to indicate correct strategy.

c.)

	number of teachers	# of students	total cost
group 1	5	15	\$125
group 2	8	9	\$125
group 3	1	23	\$125

c) Student's response includes three correct pairs of numbers.

NECAP 2008 RELEASED ITEMS
GRADE 7 MATH

SCORE POINT 4
(EXAMPLE B)

15

a. $c = 10t + 5s$
 $10(3) + 5(40) = \$230$

a) Student's response is correct.
(Showing work is not required.)

b. $10t + 5(50)$
 $5(50) = 250$
 $10(4) + 5(50) = 290$

$\begin{array}{r} \$290 \\ -250 \\ \hline 40 \end{array}$

4 teachers

b) Student's response is correct,
with sufficient work to indicate
correct strategy.

c.

	# of teacher	# of students	total cost
group 1	2	21	\$125
group 2	3	19	\$125
group 3	4	17	\$125

c) Student's response includes
three correct pairs of numbers.

NECAP 2008 RELEASED ITEMS
GRADE 7 MATH

SCORE POINT 3
(EXAMPLE A)

15

a) Student's response is incorrect.

A) In dollars it will cost \$50 for the group from Jamestown School to go to the museum.

b) With 50 students in the group there will be 4 teachers, because $5 \times 50 = 250$ and $10 \times 4 = 40$, $250 + 40 = 290$. So that makes 290 dollars.

c)

	Number of Teachers	Number of Students	Total Cost
Group 1	1	23	\$125
Group 2	2	21	\$125
Group 3	3	19	\$125

$$10 \times 1 = 10 \quad 5 \times 23 = 115 \quad 10 + 115 = 125$$

$$10 \times 2 = 20 \quad 5 \times 21 = 105 \quad 20 + 105 = 125$$

$$10 \times 3 = 30 \quad 5 \times 19 = 95 \quad 30 + 95 = 125$$

c) Student's response includes three correct pairs of numbers. (Showing work is not required.)

b) Student's response is correct, with sufficient explanation shown to indicate correct strategy.

NECAP 2008 RELEASED ITEMS
GRADE 7 MATH

SCORE POINT 3
(EXAMPLE B)

15

a) $\$30 + \$200 = \$230.00$

a) Student's response is correct.
(Showing work is not required.)

b.) $5 \times 50 = \$250$ 4 teachers

260
270
280
290

b) Student's response is correct,
with sufficient work to indicate
correct strategy.

c.)

	Number of Teachers	Numbers of Students	Total Cost
Group 1	2	11	\$125
Group 2	10	5	\$125
Group 3	9	7	\$125

c) Student's response includes two
correct pairs of numbers.

NECAP 2008 RELEASED ITEMS
GRADE 7 MATH

SCORE POINT 2
(EXAMPLE A)

15

A) $3T + 40s$

a) Student's response is incorrect.

B) $50 \times 5 = 250 + 12.5 = \290

b) Student's response is incorrect.

C

	# of teachers	# of students	Total Cost
Group 1	2	21	\$125
Group 2	1	23	\$125
Group 3	3	19	\$125

c) Student's response includes three correct pairs of numbers.

NECAP 2008 RELEASED ITEMS
GRADE 7 MATH

SCORE POINT 2
(EXAMPLE B)

15

a. Answer is \$230.00

$$t = 3 \text{ and } s = 40$$

$$10 \cdot 3 + 5 \cdot 40 = 230$$

$$30 + 200$$

a) Student's response is correct.
(Showing work is not required.)

b. There are 4 teachers.

$$10t + 5 \cdot 50 =$$

$$40 + 250 = 290$$

$$\begin{array}{r} 250 \\ + \quad ? \\ \hline 290 \end{array} \quad ? = 40$$

b) Student's response is correct,
with sufficient work shown to
indicate correct strategy.

c.

	# of teachers	# of students	total cost
group 1	2	20	125
group 2	20	2	125
group 3	3	19	125

c) Student's response contains only
one correct pair of numbers.

NECAP 2008 RELEASED ITEMS
GRADE 7 MATH

SCORE POINT 2
(EXAMPLE C)

15

a. it will cost 230\$

a) Student's response is correct.

b. 8 teachers

$$\begin{array}{r} 58 \\ 5 \overline{) 290} \\ \underline{-25} \\ 40 \end{array}$$

b) Student's response is incorrect.

c.

	# of teach.	# of students	total cost
Group 1	0	25	125
Group 2	5	15	125
Group 3	10	5	125

c) Student's response contains three correct pairs of numbers.

NECAP 2008 RELEASED ITEMS
GRADE 7 MATH

SCORE POINT 1
(EXAMPLE A)

15

a) Student's response is incorrect.

(A) 570

b) Student's response is incorrect.

(B) 58 teachers

(C)

	Number of teachers	Number of students	Total cost
Group 1	5	15	\$125
Group 2	10	5	\$125
Group 3	2	20	\$125

c) Student's response contains two correct pairs of numbers.

NECAP 2008 RELEASED ITEMS
GRADE 7 MATH

SCORE POINT 1
(EXAMPLE B)

15

A

\$230.00

a) Student's response is correct.

B

$$\begin{array}{r} \times \times 58 \\ 50 \overline{) 2900} \\ \underline{-250} \\ 400 \\ \underline{-400} \\ 000 \end{array}$$

58

b) Student's response is incorrect.

C

	# of students	# of teachers	total cost
91	3	20	\$125
92	2	30	\$125
93	4	15	\$125

c) Student's response is incorrect.

NECAP 2008 RELEASED ITEMS
GRADE 7 MATH

SCORE POINT 0
(EXAMPLE A)

15

A) It will be 10 dollars for all the teachers and five for all the students.

a) Student's response is incorrect.

B) There are 29 teachers in the group.

b) Student's response is incorrect.

C)

	Number of teachers	Number of students	total cost
Group 1	10	5	\$125
Group 2	20	10	\$125
Group 3	30	20	\$125

c) Student's response includes only one correct pair of numbers.

NECAP 2008 RELEASED ITEMS
GRADE 7 MATH

SCORE POINT 0
(EXAMPLE B)

15

(A) #230

a) Student's response is incorrect.

(B) NO clue

b) Student does not respond.

(C)

group	# of teachers	# of students	total
group 1	10	5	125
group 2	?	?	125
group 3	?	?	125

c) Student's response includes only one correct pair of numbers.